

Abstract of the Disclosure

An optical cross-connect switch is disclosed for switching optical communication signals between any of a plurality of input optical channels and any of a plurality of output optical channels. The switch comprises a first pattern projector configured to project one or more first control signal radiation patterns and a plurality of output encoders. Each output encoder is associated with one of the plurality of output optical channels. Each output encoder is positioned, relative to its associated output optical channel and the first pattern projector, to receive the first control signal radiation patterns and to detect at least a portion of one or more corresponding output Moiré interference patterns produced by the control signal radiation patterns. Each output encoder is configured to generate a corresponding output control signal indicative of an intensity of detected output Moiré interference patterns.